UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
ARANI, TAGHI T

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cov r sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on <u>01 July 2004</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-30* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-7,9-17 and 19-29* is/are rejected.

7) ☒ Claim(s) *8,18 and 30* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage

       application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-30 were pending for examination.

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads (US Appl.

No. 2001/0023193) and further in view of Jotcham et al. (US Patent No. 6, 085,903).

As per claim 1, Rhoads is directed to wireless telephony device (i.e. hand held system)

equipped with an optical image sensor, and a lens for imaging an object onto the sensor, see

abstract. The optical sensor of Rhoads permits decoding of bar codes, watermarks, etc. (i.e.

digitally watermarked data), from objects imaged by the sensor.

Rhoads' wireless telephony system includes an optical sensing system of the type known

from Microsoft IntelliMouse comprising a 1D array of plural optical sensors (e.g. CCD, CMOS),

or a 2D array wherein the device includes multi-element CMOS optical sensor integrated on an

IC with various detector and processing circuitry, operating in conjunction with a short focal

length imaging lens and an LED illumination source, see page 1, paragraph 0007-0008.

Rhoads teaches that the optical data collected by the sensor is processed within the

processor to extract the steganographically encoded binary "Bedoop" (i.e. digitally watermarked

data) data therefrom, see page 1, paragraph 0010.

Rhoads 's hand held system detects the watermark (i.e. "Bedoop") data and relays it to

an associated computer (i.e. coupling the extracted information through a communication link to

an external data processor).

Rhodes fail to teach " said digitally watermarked image is applied to a substrate

containing at least one taggant, said at least one taggant providing additional information utilized

in conjunction with the information encoded within the digitally watermarked image".

Jotcham teaches a security packaging. Jotcham discloses that coved security features can

also be provided by a number of known means. These include security fibers, embedded security

threads, plainchants and furnishes which are only visible when the package 10 is subjected to

fluorescent or infrared light, magnetic features, radio frequency encoded threads and circuits,

taggants which may be biological, inorganic or coded inclusions and chemical

sensitization. Coved security features can also include embedded metallic or de-metallised

threads which may be machine readable and may also provide a tactile effect (see Figure 1, col 5,

lines 10-19). Hence, Jotcham teaches the use of taggants within security features such as

watermarks.

In view of the teaching of Jotcham et al., it would have been obvious to one of

ordinary skill in the art at the time the invention was made to employ taggants

within the "bedoop" data because taggants are a useful way to obtain information about a

specific product. With more information available about a product, the easier the product can be

identified and verified.

As per claims 2- 3, Rhoads' scanner can be wired to an associated host system, wireless

links (e.g., radio, infrared, ultrasonic etc.), see page 1, paragraph 0014.

As per claims 4-5, Rhoads further teaches that the protocols by which the Bedoop data

is conveyed from the hand held scanner to the network can take various forms including Internet,

see page 2, paragraph 25 (i.e. through various data communication including internet).

As per claim 6, in an embodiment of Rhoads' Bedoop sensor is integrated into a cellular

phone, see page 1, paragraph 0015 with ready links to remote server (i.e. through Internet)

systems, see page 2, paragraph 16-17. That is, a wireless link with an interface to the Internet

recited in the claim.

Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over of Rhoads as

applied to claim 1 above, and further in view of Rhoads, Us Pat. Appl. No. 6,311,214, issued

Oct. 2001.

Rhoads ('214) is directed to steganographically encoding printed object with plural-bit

data, see abstract.

Rhoads teaches compensating distortion of the watermarked data, see page 16, lines 5-12.

It would have been obvious to one of ordinary skill in the art to modify Rhoads's

scanning device disclosed in 2001/0023193 to account for distorted Bedoop mark encoded in

objects such as "Business Card" to facilitate decoding in the presence of arbitrary rotation or

scale distortion of the object introduced during scanning, see page 16, lines 5-12.

Claims 9-17, 19-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rhoads (US Pat. No. 6,311,214) and further in view of Jotcham et al. (US Patent No. 6,

085,903).

As per claims 9, 10, 13, 19, Rhoads discloses a method an apparatus for

steganographically encoding a plural-bit data (i.e. digitally watermarking data) on or in a printed

object such as an item of postal mail, a book, printed advertising, a business card, product

packaging, etc. When such an object is presented to an object is presented to an optical sensor (of

a hand held system) , the plural-bit data is decoded and used to establish a link to an Internet

address corresponding to that object, see abstract.

In an exemplary embodiment, Rhoads's invention includes an optical sensor, a computer

and a network connection to the Internet, see Fig. 1, see also col. 2, line 64 through col. 3, line

29. Rhoads teaches that the optical sensor (a digital camera or hand held device) operates to grab

frames of image data (i.e. digitally watermarked data) where the frames of image of data are

analyzed by a computer for the presence of "Bedoop data" (any form of digital data encoding

recognized by the system-data which initiates some action). Once detected, the system responds,

in accordance with the detected Bedoop data (e.g. by initiating some local action, or by

communicating with a remote computer, such as over the Internet.

Rhoads further teaches further teaches transmitting the extracted information through

one of a wired or wireless communication link towards a data processor located external to the

hand-held device (**additionally recited in claims 19, 10 and 13**), see col. 32, lines 40-63.

Rhoads fail to teach " wherein the digitally watermarked image is applied to a substrate

containing at least one taggant for specifying additional information, and where the step of

processing uses the additional information in conjunction with the information encoded within

the digitally watermarked image", recited in claims 9 and 19.

Jotcham teaches a security packaging. Jotcham discloses that coved security features can

also be provided by a number of known means. These include security fibers, embedded security

threads, plainchants and furnishes which are only visible when the package 10 is subjected to

fluorescent or infrared light, magnetic features, radio frequency encoded threads and circuits,

taggants which may be biological, inorganic or coded inclusions and chemical

sensitization. Coved security features can also include embedded metallic or de-metallised

threads which may be machine readable and may also provide a tactile effect (see Figure 1, col.

5, lines 10-19). Hence, Jotcham teaches the use of taggants within security features such as

watermarks.

In view of the teaching of Jotcham et al., it would have been obvious to one of

ordinary skill in the art at the time the invention was made to employ taggants

within the "bedoop" data because taggants are a useful way to obtain information about a

specific product. With more information available about a product, the easier the product can be

identified and verified.

As per claim 11-12 and 20-21, Rhoads teaches that once Bedoop data is detected , the

system responds , in accordance with the detected Bedoop data by initiating some local action, or

by communicating with a remote computer, such as over the Internet (i.e. a data communications network), Rhoads '214 , col. 3, lines 7-12, see also Fig. 1.

As per claims 15 and 22, Rhoads teaches that the extracted information is comprised of a data communication network address through which the data processor can be reached (i.e. Class ID, DNS, and UID), Rhoads '214, col. 7, lines 7-49.

As per claims 16 and 23, Rhoads discloses another Bedoop application wherein the action is comprised of using the extracted information to access a database, Rhoads '214, col. 3, line 58 through col. 4, line 26.

As per claim 17, Rhoads discloses various image input device such as digital cameras as built-in components of certain computer or camera-on-a-chip systems equipped with Bedoop detector hardware integrated on the same chip substrate to find and decode Bedoop data from the image data, see col. 32, lines 1-26. This clearly suggests that generating and processing occurs within the image input device as recited in the claim.

As per claim 24, Rhoads teaches that the extracted information from the Bedoop data serves to identify the object in Bedoop-encoded packaging, Rhoads '214, col. 3, lines 26-45.

As per claims 25 and 26, Rhoads teaches that the extracted information may be used to verify an identity of a person associated with the object (such as photograph on a badge) and to obtain information (such as name) that is associated with a person who is associated with the object such as name of a person depicted by a photograph, see col. 11, line 49 through col. 12, line 29.

As per claim 27, In another example, Rhoads teaches that UID field of watermark (Bedoop data) serves an authentication purpose, e.g., to verify that the printed medium actually was printed at a particular place, or by a particular user or at a particular time, Rhoads '214, col. 13, lines 61-64.

As per claims 28-29, Rhoads teaches in various exemplary embodiment s in which in response to Bedoop data, a data processor transmits information to the requester (i.e. hand held device) and that the information received is displayed to the requester, for example see Rhoads 214, col. 22, lines 24-65.

Allowable Subject Matter

Claims 8, 18 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Action is Final

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
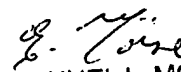
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taghi T. Arani whose telephone number is (571) 272-3787. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Taghi T. Arani, Ph.D.
Examiner
Art Unit 2131

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PRIMARY EXAMINER